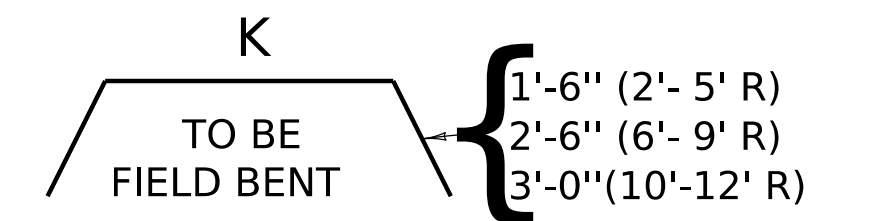


M A R K	S I Z E	NO	LGTH		K		M A R K	S I Z E	NO	LGTH		K		M A R K	S I Z E	NO	LGTH		K										
			①	FT	IN	FT				IN	①	FT	IN				FT	IN	①	FT	IN	FT	IN						
12'-10" X 8'-4"							12'-10" X 8'-4" (CONT'D)							15'-4" X 9'-3" (CONT'D)							15'-4" X 9'-3" (CONT'D)								
A1	5	2	11	4			S6	5	2	8	9			B10	5	4	9	5			S14	5	2	20	10				
A2	5	2	20	2			S7	5	2	10	2			B11	5	50	9	11			S15	5	2	22	3				
B1	5	4	4	1			S8	5	2	11	8			C1	4	2	27	7			S16	5	2	23	0				
B2	5	4	4	8			S9	5	2	13	1			C2	4	2	31	4			T1	5	2	1	2				
B3	5	4	5	2			S10	5	2	14	5			C3	4	2	35	1			T2	5	2	1	11				
B4	5	4	5	9			S11	5	2	15	10			C4	4	2	38	9			T3	5	2	2	7				
B5	5	4	6	3			S12	5	2	7	2			C5	4	2	42	6			T4	5	2	3	4				
B6	5	4	6	10			S13	5	2	18	8			C6	4	8	44	5			T5	5	2	4	0				
B7	5	4	7	4			S14	5	2	19	6			E1	5	2	35	7	30	7	T6	5	2	4	8				
B8	5	4	7	11			T1	5	2	1	6			E2	5	2	36	2	31	2	T7	5	2	5	5				
B9	5	4	8	5			T2	5	2	2	2			F	4	31	1	5	0	6	T8	5	2	6	1				
B10	5	42	9	0			T3	5	2	2	11			G1	4	1	30	0			T9	5	2	6	10				
C1	4	2	20	10			T4	5	2	3	7			G2	4	2	32	10			T10	5	2	7	7				
C2	4	2	24	7			T5	5	2	4	4			G3	4	2	35	8			T11	5	2	8	3				
C3	4	2	28	2			T6	5	2	5	0			G4	4	2	38	5			T12	5	2	8	11				
C4	4	2	31	10			T7	5	2	5	9			G5	4	2	41	3			T13	5	2	9	8				
C5	4	2	35	6			T8	5	2	6	5			G6	4	3	44	0			T14	5	2	10	4				
C6	4	8	39	1			T9	5	2	7	2			H	4	23	13	11	11	3	T15	5	2	11	1				
E1	5	2	30	9	25	9	T10	5	2	7	10			J1	5	4	4	8			T16	5	2	11	9				
E2	5	2	31	4	26	4	T11	5	2	8	7			J2	5	4	5	9			T17	5	2	12	5				
F	4	27	1	5	0	6	T12	5	2	9	3			J3	5	4	6	9			T18	5	2	13	2				
G1	4	2	26	9			T13	5	2	10	0			J4	5	4	7	10			T19	5	2	13	11				
G2	4	2	29	7			T14	5	2	10	8			J5	5	4	8	10			T20	5	2	14	7				
G3	4	2	32	5			T15	5	2	11	4			J6	5	2	9	11			T21	5	2	15	3				
G4	4	2	35	2			T16	5	2	12	1			K1	4	2	2	4			T22	5	2	16	0				
G5	4	3	38	0			T17	5	2	12	9			K2	4	2	4	3			T23	5	2	16	2				
H	4	20	13	0	10	4	T18	5	2	13	6			K3	4	2	6	2			X1	4	1	2	3	1	2		
J1	5	4	4	3			T19	5	2	13	7			K4	4	2	8	1			X2	4	1	2	7	1	4		
J2	5	4	5	3			X1	4	1	2	5	1	3	K5	4	2	10	0			X3	4	1	2	11	1	6		
J3	5	4	6	4			X2	4	1	2	9	1	5	K6	4	8	11	0			X4	4	1	3	5	1	9		
J4	5	4	7	4			X3	4	1	3	3	1	8	M1	4	1	2	10			X5	4	1	3	10	1	11		
J5	5	4	8	5			X4	4	1	3	7	1	10	M2	4	55	4	9			X6	4	1	4	2	2	1		
K1	4	2	2	6			X5	4	1	4	1	2	1	N1	4	8	11	0			X7	4	1	4	5	2	3		
K2	4	2	4	5			X6	4	1	4	5	2	3	N2	4	5	40	10			Z	4	2	9	11	8	11		
K3	4	2	6	4			Z	4	2	9	0	8	0	N3	4	3	44	8											
K4	4	2	8	3										P	7	56	7	5	5	2									
K5	4	8	10	0										Q	5	4	15	4											
M1	4	1	2	11										R	5	16	3	8											
M2	4	48	4	9			15'-4" X 9'-3"							S1	5	2	2	4											
N1	4	8	10	0			A1	5	2	12	5			S2	5	2	3	9											
N2	4	5	35	5			A2	5	2	22	0			S3	5	2	5	3											
N3	4	3	39	4			B1	5	4	4	7			S4	5	2	6	8											
P	7	49	6	11	4	8	B2	5	4	5	1			S5	5	2	8	1											
Q	5	4	12	10			B3	5	4	5	8			S6	5	2	9	6											
R	5	14	3	8			B4	5	4	6	2			S7	5	2	10	11											
S1	5	2	1	8			B5	5	4	6	9			S8	5	2	12	3											
S2	5	2	3	1			B6	5	4	7	3			S9	5	2	13	9											
S3	5	2	4	7			B7	5	4	7	10			S10	5	2	15	2											
S4	5	2	6	0			B8	5	4	8	4			S11	5	2	16	7											
S5	5	2	7	4			B9	5	4	8	10			S12	5	2	18	0											
														S13	5	2	19	5											

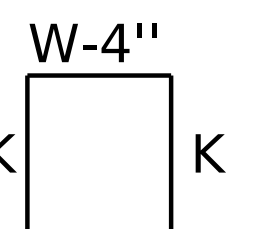
NOTES

- ① NUMBER OF BARS IN ONE HEADWALL.
- 2 DIMENSIONS ARE 0. TO 0. OF BARS.
- 3 ALL BARS ARE STRAIGHT EXCEPT THOSE SHOWN BELOW.
- 4 R = BOX OR PIPE RISE
- 5 W = WING WALL WIDTH

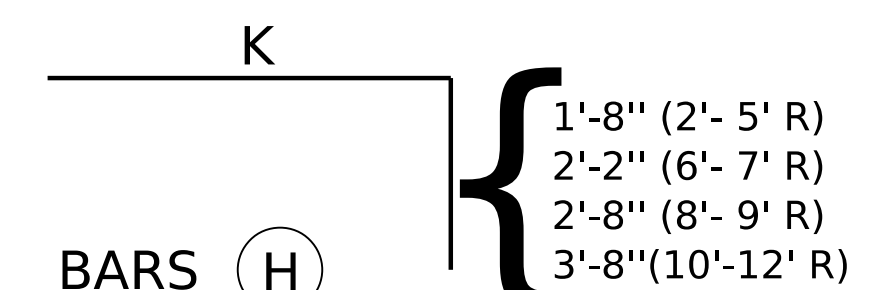
BENT BAR SHAPES



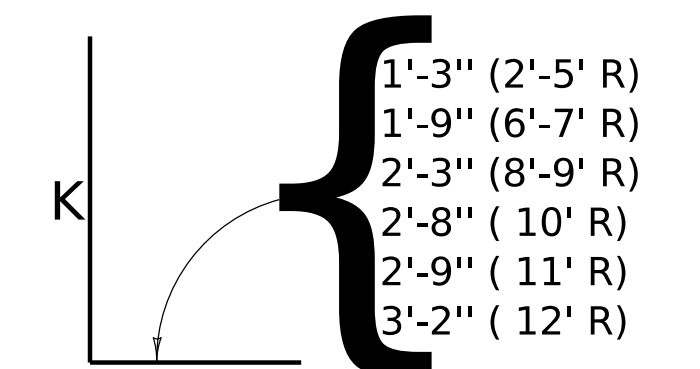
BARS ①



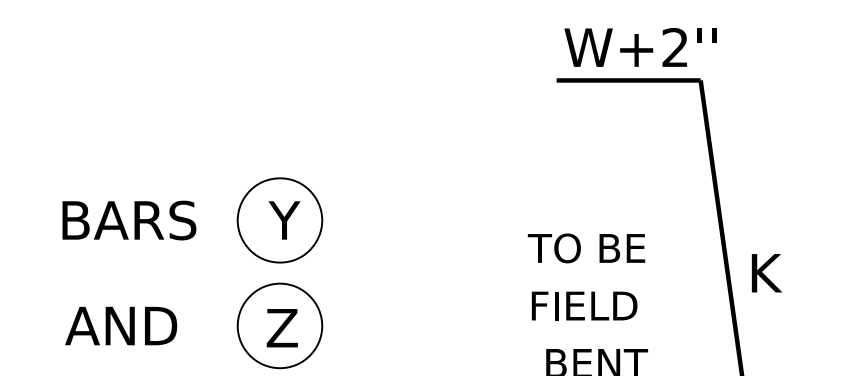
BARS ②, ③ AND ④



BARS ⑤



BARS ⑥, ⑦ AND ⑧



BARS ⑨

AND ⑩

**KENTUCKY
DEPARTMENT OF HIGHWAYS**

*BILL OF REINFORCEMENT
12'-10" x 8'-4" - 15'-4" x 9'-3"
STEEL PIPE ARCHES
45° SKEW*

STANDARD DRAWING NO. RDH-465-03

SUBMITTED _____ DIRECTOR DIVISION OF DESIGN _____ DATE _____
APPROVED _____ STATE HIGHWAY ENGINEER _____ DATE _____